

REMARKS

Claims 17 and 19-26 are currently pending.

Rejections Under 35 USC §103(a)

The Examiner has rejected claims 17 and 19-26 under 35 USC §103(a) as being unpatentable over Nakahara et al. (US 5,374,366). Nakahara is cited for disclosing a lubricating oil compositions synthesized from esters combined with various polyols and linear and branched mono- and di-carboxylic acid, said lubricating oils mixed with fluorocarbon refrigerants. The Examiner asserts that the Nakahara reference specifically discloses mixed esters and a composition comprised of a complex ester between HPHP and NPG. The Examiner has acknowledged that this reference does not disclose a composition comprising HPHP and the specific glycols recited in claim 17. However, the Examiner concludes that such a composition would have been obvious to one skilled in the art given the disclosure of the Nakahara reference because Nakahara discloses that all of the claimed glycols in applicant's claim 17 are "equivalents" to NPG and thus, a person of ordinary skill in the art would be motivated to substitute one of the claimed polyols in place of NPG in example 10 of Nakahara. Applicant respectfully traverses.

In Applicant's previous response, Applicant had pointed out that the Nakahara reference failed to provide a working example of an ester mixture utilizing HPHP in combination with one of the claimed glycols. Applicant also argued that these esters of HPHP had superior lubricant properties and specifically referred to data within the application in support of their argument. Applicant's arguments were not found persuasive as comparative evidence to substantiate the superiority of the claimed compositions over those exemplified in the references was not presented. The Examiner also stated that Applicant's reliance on examples 7 and 9 in Table 4 was misplaced because these examples were directed to compositions which were not claimed. The Examiner also stated that Applicant's arguments regarding the advantages obtained using

pure, commercially available HPHP rather than the HPHP obtained in Example 4 (and 10) of Nakahara were similarly not persuasive because argument cannot take the place of evidence in the form of a declaration.

An analysis of the data presented in the application and the disclosure of the Nakahara reference reveals the important differences between the claimed compositions and the Nakahara compositions, the lack of motivation to substitute one of the claimed polyols for NPG in Example 10 of Nakahara, and the benefits and advantages of using pure, commercially available HPHP rather than the HPHP produced in Nakahara. The present invention relates to novel compositions comprising chlorine-free hydrofluorocarbon based refrigerants mixed with (a) polyol esters based on a mixture of HPHP and a polyol selected from TMP, TME, PE or TMPD, wherein the HPHP content is more than half of the total amount of the polyol residue. The use of pure, commercially available HPHP as a starting material as opposed to preparing the HPHP as described in Nakahara results in quantifiable time and cost savings as post-treatment and purification steps can be eliminated. The non-obviousness of the present invention is also demonstrated by the results in Table 4 of the application which reveal that the solubility of polyol esters in refrigerants can be improved by increasing the concentration of HPHP relative to the other polyol residue (compare samples 6 and 8). The lower limit of the HPHP is determined by the second polyol used. A comparison of samples 7 and 9 reveals that substituting a different polyol with HPHP can improve solubility.

Although Nakahara may disclose the use of polyol mixtures comprising HPHP, this reference does not disclose working examples of the mixtures claimed in the instant application. Even if one were to assume that Nakahara teaches that the claimed polyols could be substituted for NPG in their Example 10, this represents nothing more than an invitation to experiment as there is no suggestion that HPHP could be used as the main polyol (i.e. greater than 50%) or that the changing the identity of the second polyol can increase the polyol ester's solubility in chlorine free refrigerants. Moreover, the properties of such polyol esters could not be predicted based on a reading of Nakahara.

The above comments will be further supported by a Declaration under Rule 132 that will be submitted shortly, supplemental to the response.

In view of the foregoing remarks, Applicant submits that the present invention is both novel and non-obvious in view of Nakahara et al. Reconsideration and removal of the rejection is respectfully requested.

Favorable consideration and early allowance of all the claims is requested.

In the event there are any additional matters remaining in this application, the Examiner is strongly encouraged to contact the undersigned at (714) 708-8555 in order to discuss these matters.

Pursuant to the provisions of 37 C.F.R. § 1.17 and 1.136(a), Applicant hereby petition for an extension of three (3) months to May 14, 2003 for the period in which to file a response to the Office Action dated November 14, 2002.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: May 14, 2003
(Date of Deposit)

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Susan M. Gengowithy
(Signature)
May 14, 2003
(Date of Signature)

LRS/KR/sml

Respectfully submitted,

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